ABSTRACT OF THE DISCLOSURE

Device and method for wavefront measurement of an optical imaging system by means of phase-shifting interferometry, , having a mask structure (6a) to be arranged on the object side, and/or a grating structure (7a) to be arranged on the image side. The object-side mask structure includes one or more one-dimensional mask structure patterns, and the image-side grating structure includes one or more two-dimensional grating structure patterns. Alternatively, conversely, the mask structure includes one or more two-dimensional patterns, and the grating structure includes one or more one-dimensional patterns. Additionally or alternatively, a pupil position offset caused by a lateral relative movement of the mask structure and detector element can be taken into account by back calculating the interferogram, respectively recorded by the detector element, using an associated phase-shift characteristic, or by a computational correction of wavefront derivatives, obtained from the recorded interferograms, in the direction of lateral movement. The method and/or the device can by used, for example, for determining aberration in the case of high-resolution projection objectives of microlithography exposure machines using shearing or point interferometry.